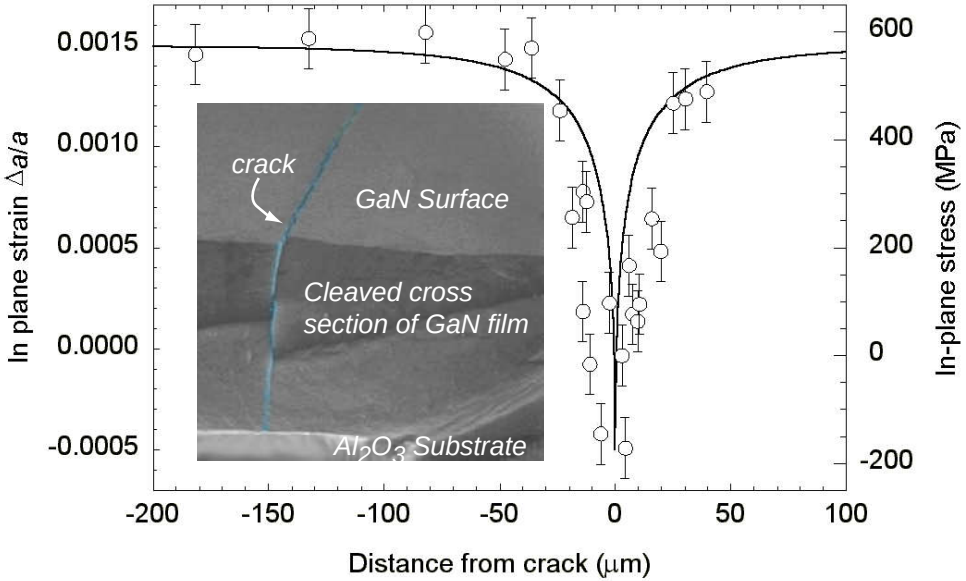
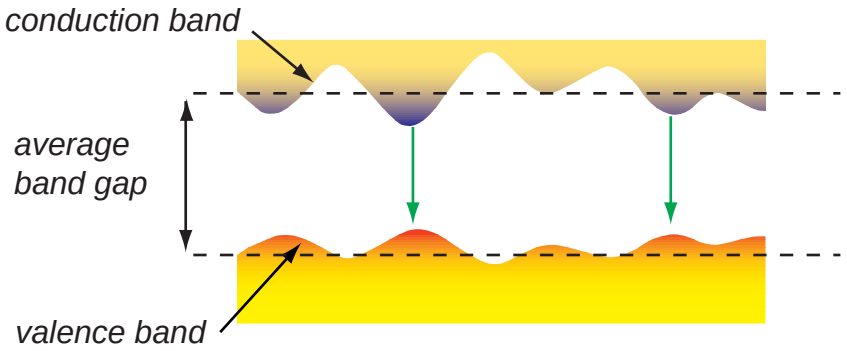
LBNL–Agilent Research Partnership Overcomes Barriers to Solid-State Light Sources

Key Discoveries Aid Development of Large-Scale Lighting Applications



Insert shows example of cracking that occurs in heavily Si-doped GaN films. Detailed investigations, such as the measurement of the local stress distribution near the crack shown in the graph, led to an improved GaN growth method that reduced the occurance of cracking.



Indium-rich regions (dark shading) in the InGaN "active" layer of the LED have a lower local band gap. High pressure optical studies showed that light is produced efficiently (green arrows) from these areas.

Agilent

Agilent LED products for improved lighting (left) and displays (right).

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